

Amendment to the Claims

Claims 1 - 49 (cancelled)

50. (New) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) mounting said support in a chamber of a flow cell and subjecting said surface to one step of said synthesis and

(c) mounting said support in a chamber of another flow cell and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

51. (New) A method according to claim 50 further comprising mounting said support after step (c) of said synthesis into a chamber of another flow cell and subjecting said surface to another step of said synthesis.

52. (New) A method according to claim 50 wherein said synthesis comprises "n" number of steps including (b) and (C) and said method comprises independently mounting a support into a chamber of one of "n" number of flow cells and subjecting said surface to a different step of said synthesis in each of said flow cells.

53. (New) A method according to claim 50 wherein reagents for step (b) of said synthesis are in fluid communication with said flow cell of step (b) and reagents for step (c) of said synthesis are in fluid communication with said flow cell of step (C) and wherein the fluid communication of the flow cell of step (b) is separate from the fluid communication of the flow cell of step (c).

54. (New) A method according to claim 50 wherein at least one of said steps of said synthesis comprises washing said surface.

55. (New) A method according to claim 50 wherein said chemical compounds are polymers.

56. (New) A method according to claim 55 wherein said polymers are biopolymers.

57. (New) A method according to claim 50 wherein said flow cells comprise a holder for said support.

58. (New) A method according to claim 50 wherein said flow cells comprise at least one inlet and an outlet.

59. (New) A method according to claim 58 wherein a wash solution and a reagent for said synthesis are independently directed to said inlet.

60. (New) A method for synthesizing an array of biopolymers on the surface of a support wherein said synthesis comprises a plurality of monomer additions, said method comprising:

(a) depositing droplets of monomer addition reagents on a surface of said support,

(b) placing said support into a chamber of a flow cell and subjecting said surface to a step of said synthesis that is subsequent to a monomer addition and

(c) placing said support into a chamber of another flow cell and subjecting said surface to another step of said synthesis that is subsequent to step (b) wherein said steps are repeated until said array of biopolymers is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is placed and wherein said flow cell of (b) is dedicated to said step (b) and said flow cell of (c) is dedicated to step (c).

61. (New) A method according to claim 60 wherein one of said steps (b) and (c) comprises a wash.

62. (New) A method according to claim 60 wherein said biopolymers are polynucleotides.

63. (New) A method according to claim 60 wherein step (b) comprises subjecting said surface to an oxidizing agent.

64. (New) A method according to claim 60 wherein step (c) comprises subjecting said surface to an agent for removing a protecting group.

65. (New) A method according to claim 60 wherein said flow cells comprise at least one inlet and an outlet and a holder for said support.

66. (New) A method according to claim 65 wherein a wash solution and a reagent for said synthesis are independently directed to said inlet.

67. (New) A method according to claim 60 wherein said biopolymers are peptides.

68. (New) A method according to claim 60 wherein said biopolymers are synthesized on said surface in multiple arrays and said support is subsequently diced into individual arrays of biopolymers on a support.

69. (New) A method according to claim 60 wherein reagents for said first step of said synthesis are in separate fluid communication with said first flow cell and reagents for said second step of said synthesis are in separate fluid communication with said second flow cell.

70. (New) A method according to claim 60 further comprising exposing the array to a sample and reading the array.

71. (New) A method according to claim 70 comprising forwarding data comprising a result obtained from a reading of the array.

72. (New) A method according to claim 70 comprising receiving data comprising a result of an interrogation obtained by the reading of the array.

73. (New) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) placing said support in a reaction chamber and subjecting said surface to one step of said synthesis and

(c) placing said support in another reaction chamber and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said reaction chambers comprises an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is placed wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

74. (New) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) immersing said support in a chamber containing a monomer solution and subjecting said surface to one step of said synthesis and

(c) immersing said support in another chamber containing a monomer solution and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said chambers comprises an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is immersed wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

75. (New) A method for synthesizing an array of chemical compounds on the surface of a support, said method comprising:

(a) contacting a surface of said support with a fluid reagent for synthesizing said chemical compounds,

(b) mounting said support in a chamber of a flow cell and subjecting said surface to one step of said synthesis and

(c) mounting said support in a chamber of the same or another flow cell and subjecting said surface to another step of said synthesis wherein (a)-(c) are repeated until said array of chemical compounds is synthesized on said surface and wherein each of said flow cells comprises a housing with a chamber and an inlet and an outlet for introduction and removal of fluids in the chamber in which the support is mounted wherein said support is selected from the group consisting of a strip, a plate or a flat glass.

76. (New) The method of claim 73 further comprising modifying said chambers to perform multiple independent steps of said synthesis.

77. (New) The method of claim 74 further comprising modifying said chambers to perform multiple independent steps of said synthesis.

78. (New) The method of claim 75 further comprising modifying said chambers to perform multiple independent steps of said synthesis.